



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,231	12/01/2003	Rebekka Epsch	58278US004	2120
32692	7590	01/11/2005	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			HU, HENRY S	
			ART UNIT	PAPER NUMBER
			1713	
DATE MAILED: 01/11/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/725,231

Applicant(s)

EPSCH ET AL.

Examiner

Henry S. Hu

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Amendment of November 3, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-15 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is in response to Amendment filed on November 3, 2004. Claim 1 was amended, process Claims 8-15 were non-elected subject matters "without" traverse by the Applicants (see page 5 bottom of Remarks) and were withdrawn from consideration by the examiner, while no new claim was added. To be more specific, Claim 1 was amended to add the limitation of "the fluoropolymer is not self-emulsifying" with the Applicants claiming a support from page 6, line 17 to page 7, line 7. Claims 1-15 are now pending, while Claims 8-15 were non-elected (without traverse) and were still withdrawn from consideration by the examiner. An action follows.

### *Response to Argument*

2. Applicant's argument filed on June 3, 2004 has been fully considered but they are not persuasive. The focal arguments related to the patentability will be addressed as follows: In view of the Applicants' argument on pages 10-12 of Remarks, the 102 rejection over McCarthy is withdrawn by the examiner since McCarthy's amended Claim 1 is directly related to self-emulsifying polymer, while the 102 rejection over Oxenrider and 103 rejection over Oxenrider/ McCarthy are sustained.

### *Claim Rejections - 35 USC § 102*

Art Unit: 1713

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. *The limitation of parent Claim 1 of the present invention relates to an aqueous fluoropolymer dispersion comprising a melt processible fluoropolymer in an amount of at least 25% by weight based on the weight of the aqueous fluoropolymer dispersion and a fluorinated*

Art Unit: 1713

*surfactant having a molecular weight of not more than 1000g/mol in an amount of **not more than 100ppm** based on the weight of fluoropolymer solids or being free of said fluorinated surfactant, said aqueous fluoropolymer dispersion having a conductivity of at least 200  $\mu$ S/cm.*  
*See other limitations of dependent **Claims 2-7**.*

6. Claims 1-2 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Oxenrider et al. (US 5,453,477) for the reasons set forth in **paragraphs 9-10** of office action dated 6-3-2004 as well as the discussion below.

7. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oxenrider et al. (US 5,453,477) in view of McCarthy et al. (US 5,955,556) for the reasons set forth in **paragraph 12** of office action dated 6-3-2004 as well as the discussion below.

8. **Applicants:** Applicant has claimed an unexpected way of obtaining an aqueous fluoropolymer dispersion comprising a melt processible fluoropolymer being not self-emulsifying as well as "with or without" a fluorinated surfactant. With respect to **102 rejections** over Oxenrider for Claims 1-2 and 6-7, the Applicants allege that the primary Oxenrider reference is only directed to suspension polymerization (see abstract, line 1-3; column 1, line 25-28), which is somewhat different from emulsion polymerization. With respect to **103 rejections** over Oxenrider/ McCarthy for Claims 3-5, the secondary McCarthy reference only disclose a self-emulsifying polymer, which is prepared from emulsification

Art Unit: 1713

polymerization. The Applicants further allege the above-mentioned prior art, in combination or alone, fails to teach or suggest a link to teach the use of **non-ionic surfactant**.

9. **Examiner:** As discussed in the earlier office action for parent Claim 1, the Oxenrider reference has already disclosed the preparation of stable aqueous fluoropolymer dispersion in the absence of soaps or surfactants due to improved wettability of polymer particles. The polymers are CTFE homopolymer and its copolymers. It is noted that iron ion in 10-1000 ppm is required to be presented in the above-mentioned preparation (column 3, line 24-34), the resultant dispersions made by Oxenrider therefore would carry the claimed good conductivity with the presence of water-solvated iron ions.

The examiner has recognized that Oxenrider reference is directed to aqueous suspension polymerization. However, Oxenrider's product is reading on aqueous fluoropolymer dispersion without any use of soap or surfactant. In a close examination, one of the option in Claim 1 is an aqueous fluoropolymer dispersion being free of said fluorinated surfactant, it does not require the type of emulsion polymerization is only applied herein.

10. With respect to the 103 rejections for Claims 3-5, Oxenrider is silent of using non-ionic surfactant for Claim 3 as well as water-soluble salt for Claims 4-5. The examiner has recognized that McCarthy reference is directed to aqueous emulsion polymerization for self-emulsifying polymers. It is noted that Oxenrider does not rule out the preparation of the formation of PCTFE by emulsion polymerization method (see column 1, line 51-60). With

Art Unit: 1713

respect to **Claim 3**, McCarthy has disclosed that various types of commercially available surfactants may optionally be pre-charged or batchwise added, and it includes non-ionic surfactants (column 8, line 5-13).

11. With respect to **Claims 4-5**, McCarthy has disclosed that suitable cationic surfactants such as the salts of fluorinated alkyl quaternary ammonium iodides can be included (column 8, line 17-18). The advantage is such addition of conventional above-mentioned surfactants in the preparation of dispersions will effectively improve the stability of aqueous dispersion. It does not matter how the aqueous dispersion is prepared from either emulsion or suspension polymerization since high molecular weigh polymers can be obtained from both ways (column 1, line 43-49).

### *Conclusion*

12. With respect to amended **Claims 1-7**, all directly relate to original Claims 1-7 and have support in the specification and claims originally filed, they **still carry the same scope of original limitations**. Therefore, the same rational recited in the rejection of original Claims 1-7 can be applied to reject Claims 1-7.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1713

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Henry S. Hu whose telephone number is (571) 272-1103. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306 for all regular communications.

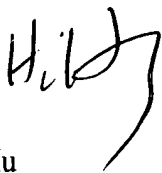
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Application/Control Number: 10/725,231

Page 8

Art Unit: 1713

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Henry S. Hu

January 10, 2005



**BERNARD LIPMAN**  
**PRIMARY EXAMINER**